FIG. 1

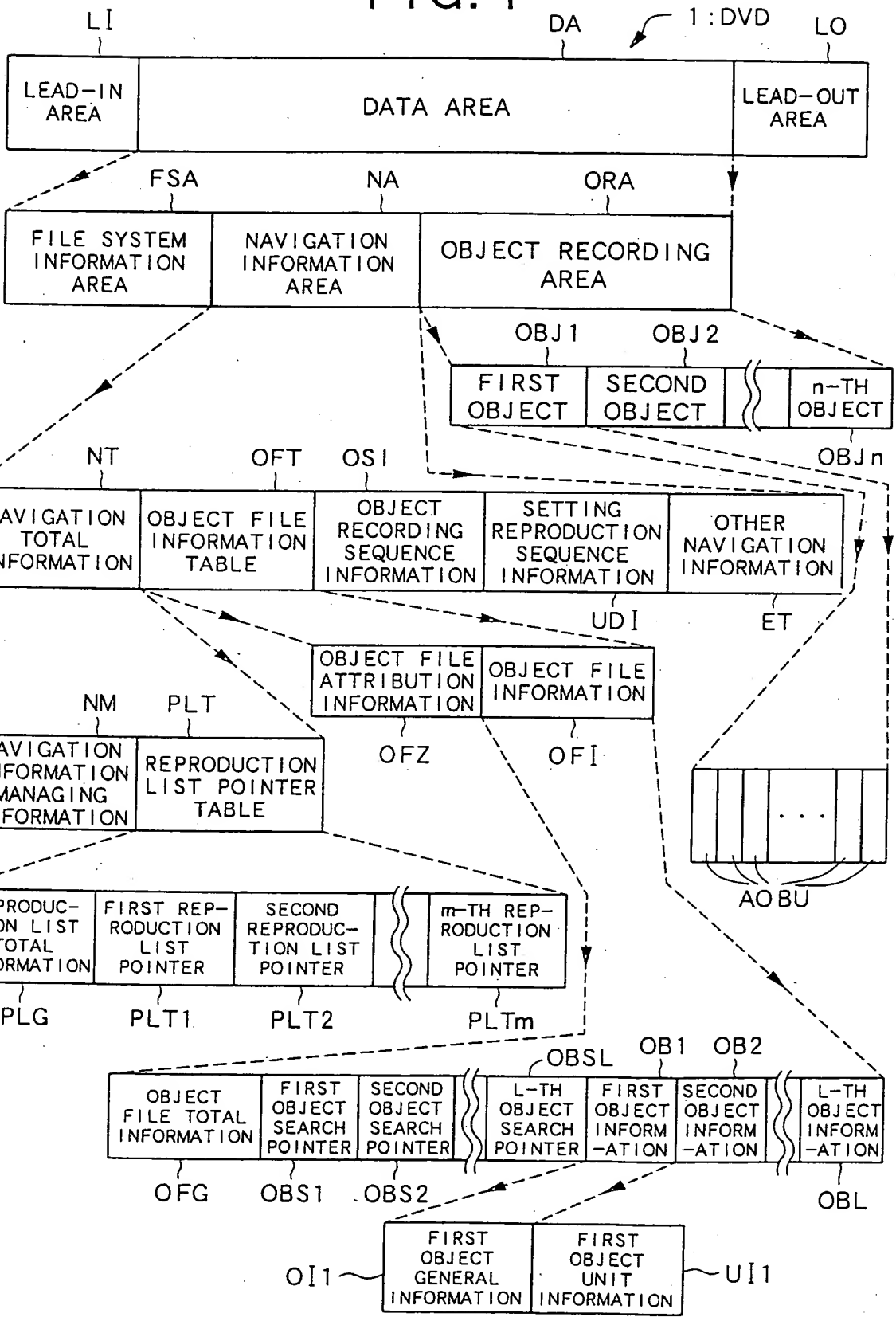

LI
DA
1:DVD
LO
LEAD-IN AREA
DATA AREA
LEAD-OUT AREA
FSA
NA
ORA
FILE SYSTEM INFORMATION AREA
NAVIGATION INFORMATION AREA
OBJECT RECORDING AREA
OBJ1
OBJ2
FIRST OBJECT
SECOND OBJECT
n-TH OBJECT
OBJn
NT
OFT
OSI
NAVIGATION TOTAL INFORMATION
OBJECT FILE INFORMATION TABLE
OBJECT RECORDING SEQUENCE INFORMATION
SETTING REPRODUCTION SEQUENCE INFORMATION
OTHER NAVIGATION INFORMATION
UDI
ET
OBJECT FILE ATTRIBUTION INFORMATION
OBJECT FILE INFORMATION
OFZ
OFI
NM
PLT
NAVIGATION INFORMATION MANAGING INFORMATION
REPRODUCTION LIST POINTER TABLE
AOBU
REPRODUCTION LIST TOTAL INFORMATION
FIRST REPRODUCTION LIST POINTER
SECOND REPRODUCTION LIST POINTER
m-TH REPRODUCTION LIST POINTER
PLG
PLT1
PLT2
PLTm
OBSL
OB1
OB2
OBJECT FILE TOTAL INFORMATION
FIRST OBJECT SEARCH POINTER
SECOND OBJECT SEARCH POINTER
L-TH OBJECT SEARCH POINTER
FIRST OBJECT INFORMATION
SECOND OBJECT INFORMATION
L-TH OBJECT INFORMATION
OFG
OBS1
OBS2
OBL
OI1
FIRST OBJECT GENERAL INFORMATION
FIRST OBJECT UNIT INFORMATION
UI1

FIG. 2

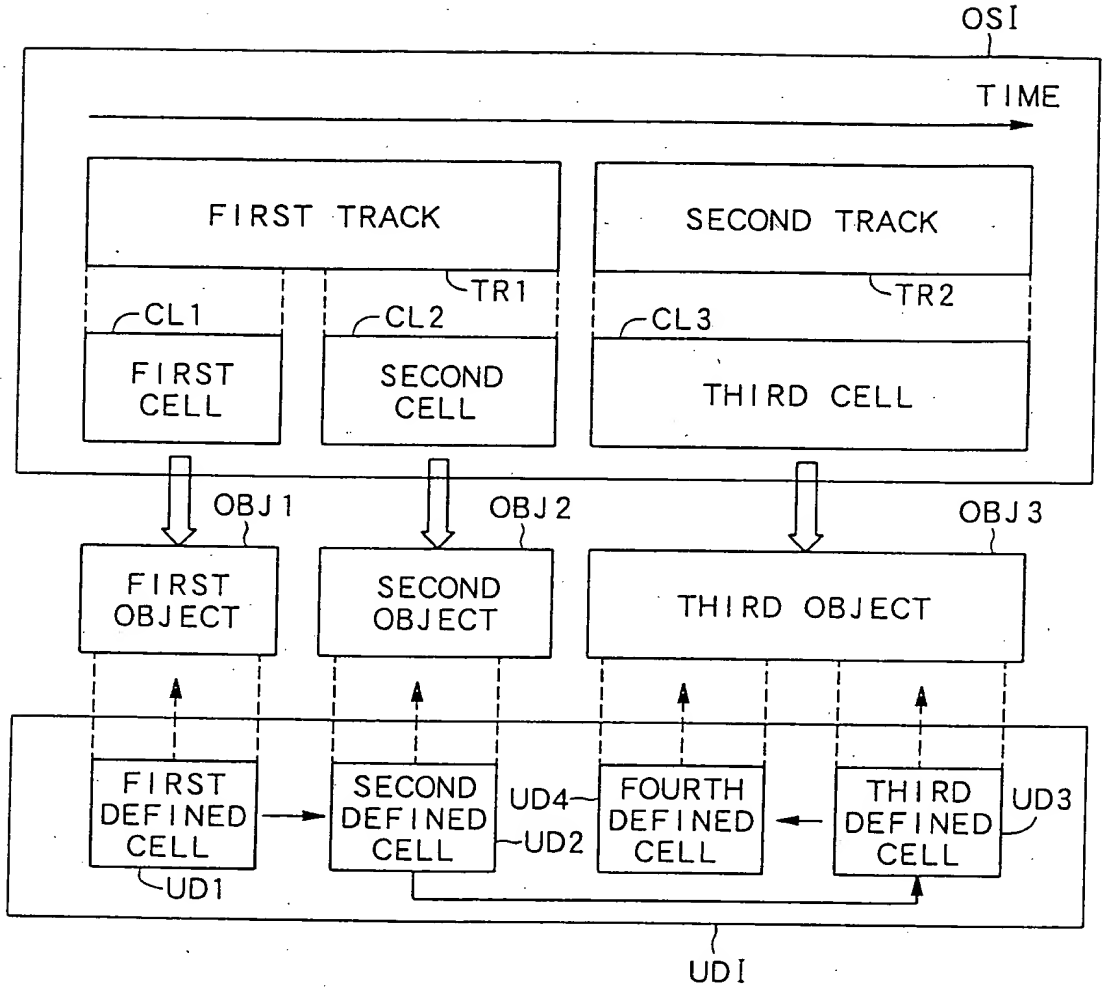

OSI
TIME
FIRST TRACK
SECOND TRACK
TR1
TR2
CL1
CL2
CL3
FIRST CELL
SECOND CELL
THIRD CELL
OBJ1
OBJ2
OBJ3
FIRST OBJECT
SECOND OBJECT
THIRD OBJECT
FIRST DEFINED CELL
SECOND DEFINED CELL
FOURTH DEFINED CELL
THIRD DEFINED CELL
UD1
UD2
UD3
UD4
UDI

FIG. 3A

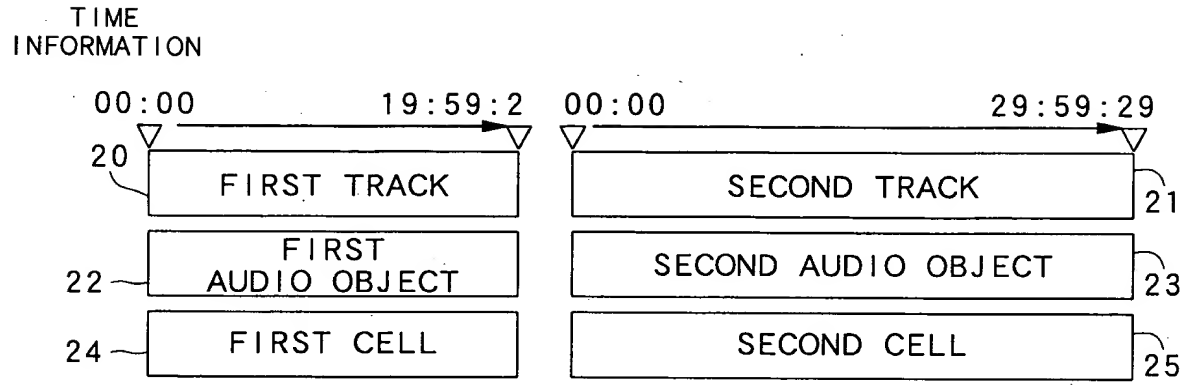
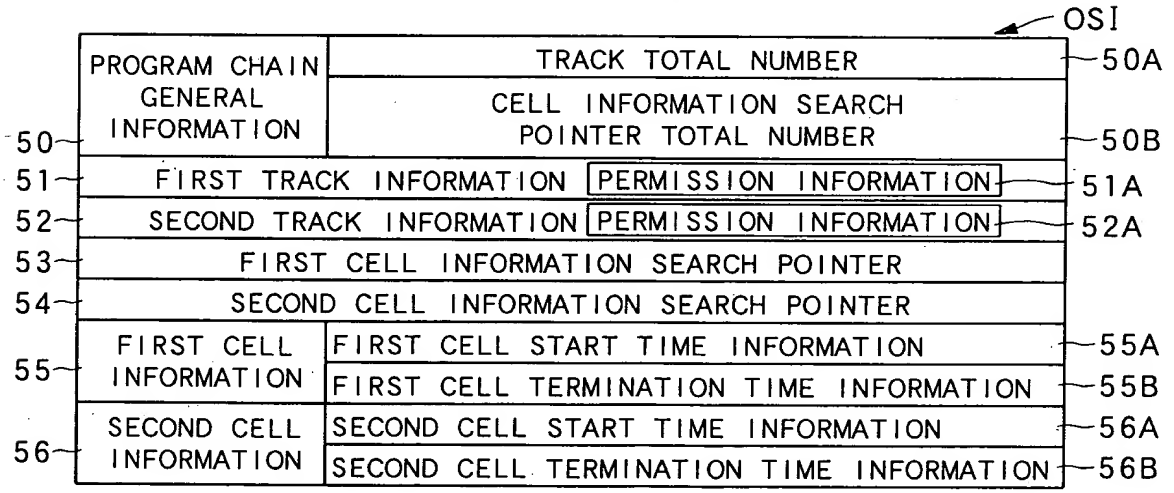


FIG. 3B



EP 0 720 170 A2

EP 0 290 042 A2

FIG. 4

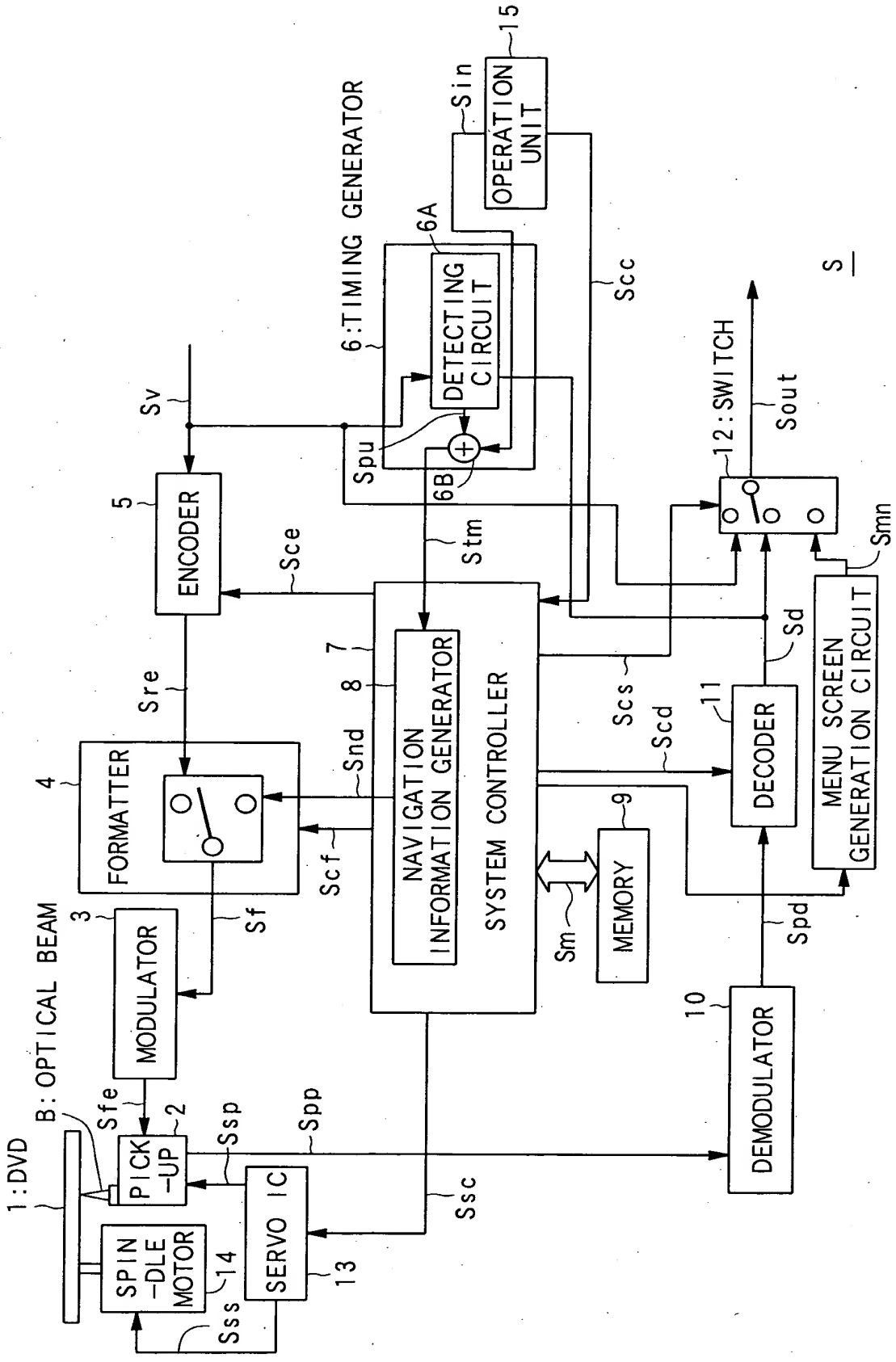


FIG. 5

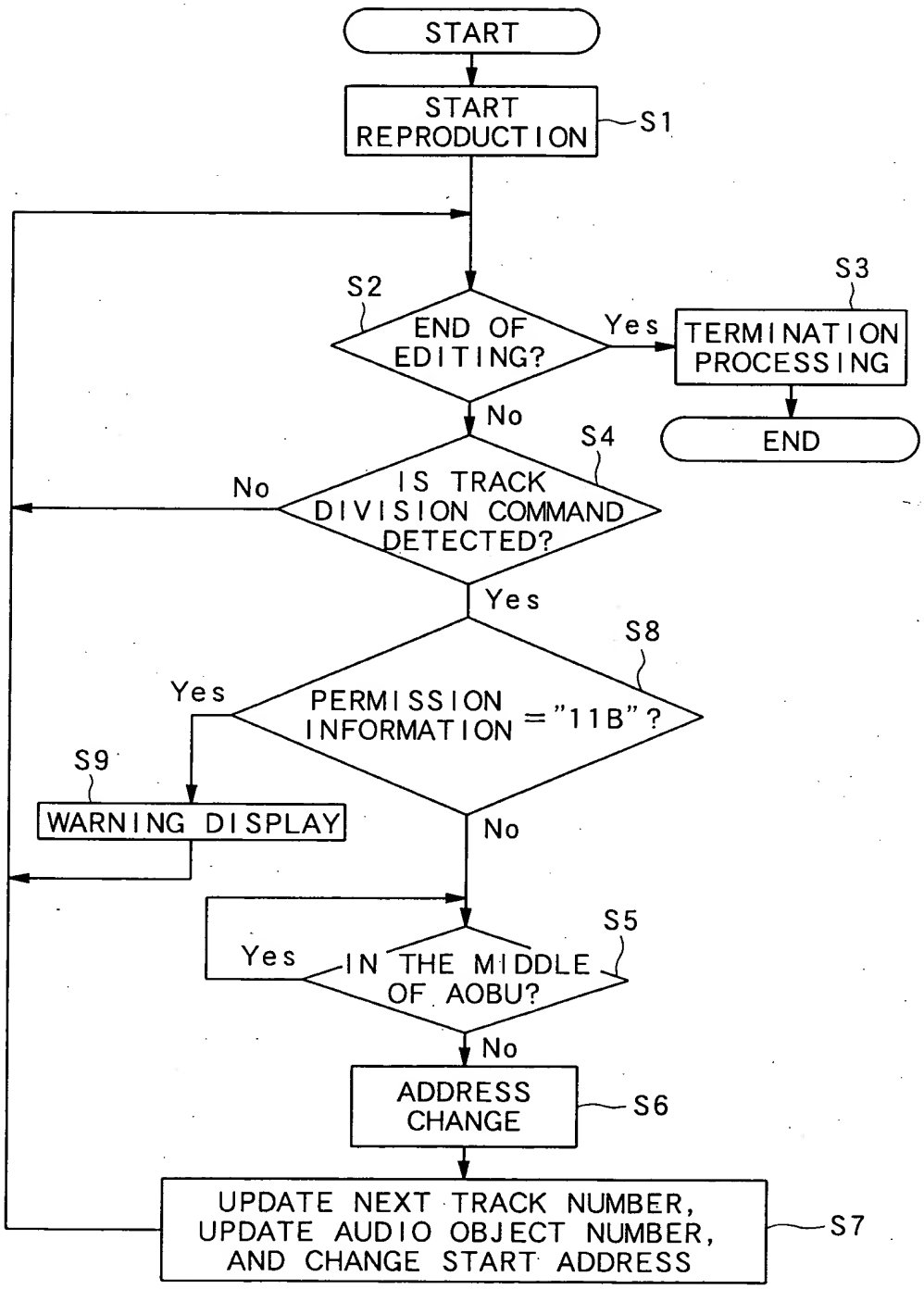
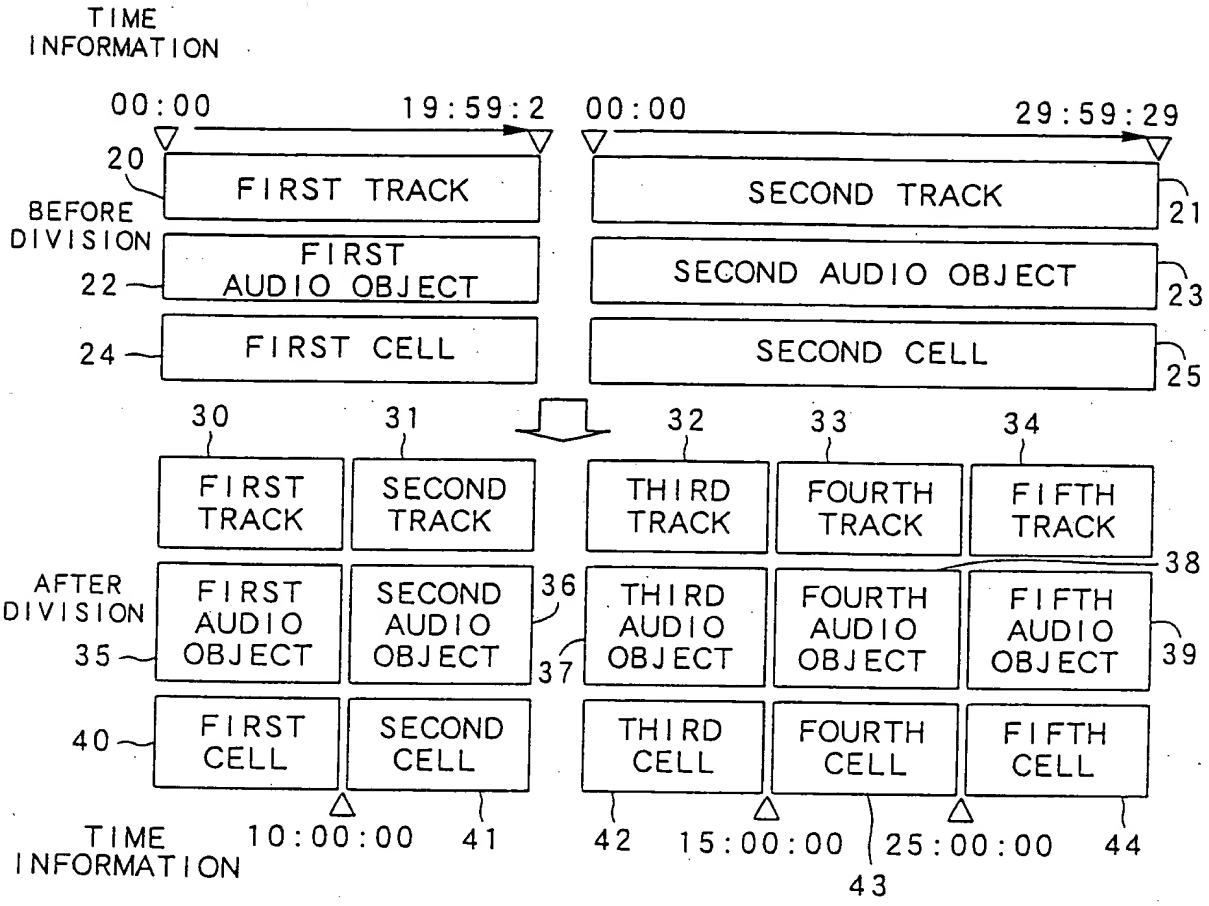

START
START REPRODUCTION
S1
S2
END OF EDITING?
Yes
S3
TERMINATION PROCESSING
END
No
S4
IS TRACK DIVISION COMMAND DETECTED?
No
Yes
S8
PERMISSION INFORMATION ="11B"?
Yes
S9
WARNING DISPLAY
No
S5
IN THE MIDDLE OF AOBU?
Yes
No
ADDRESS CHANGE
S6
UPDATE NEXT TRACK NUMBER, UPDATE AUDIO OBJECT NUMBER, AND CHANGE START ADDRESS
S7

FIG. 6



EP 0 750 309 A1

EP 0 762 290 A2

FIG. 7A

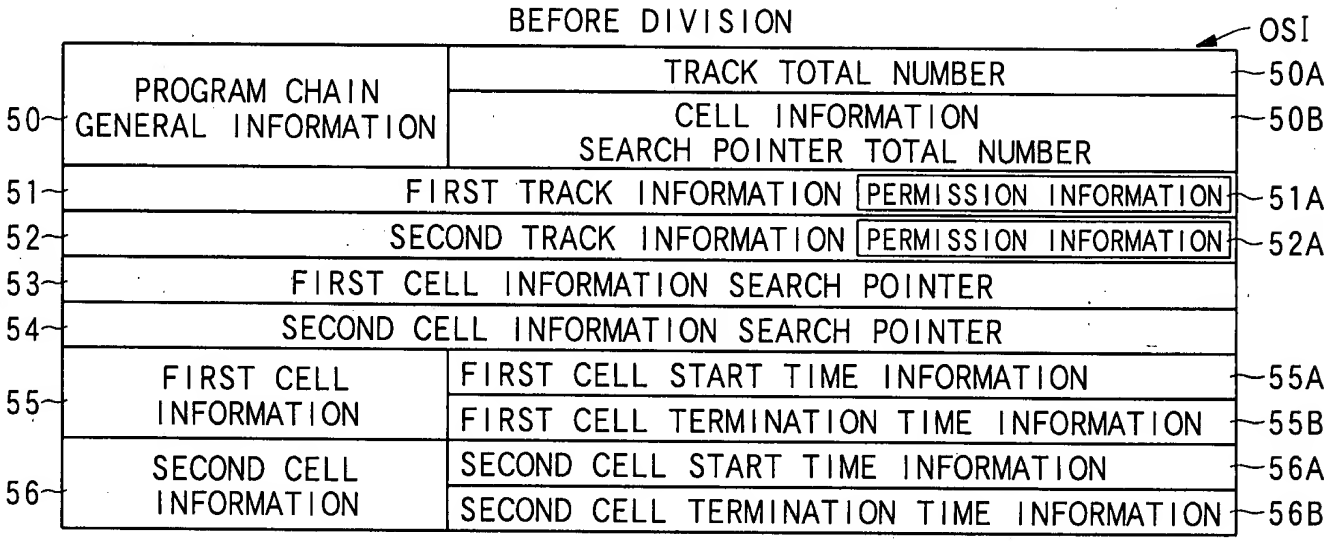


FIG. 7B

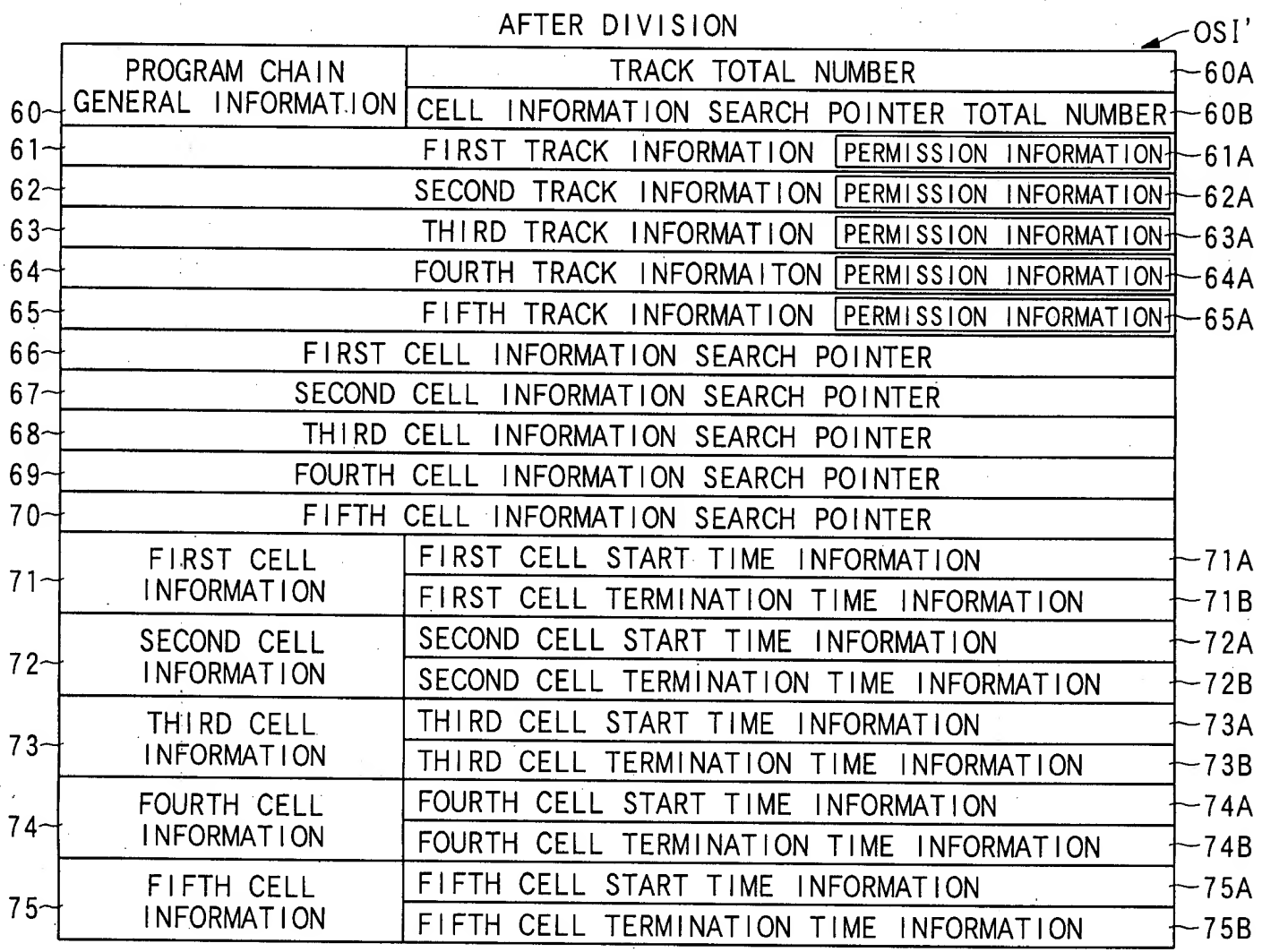
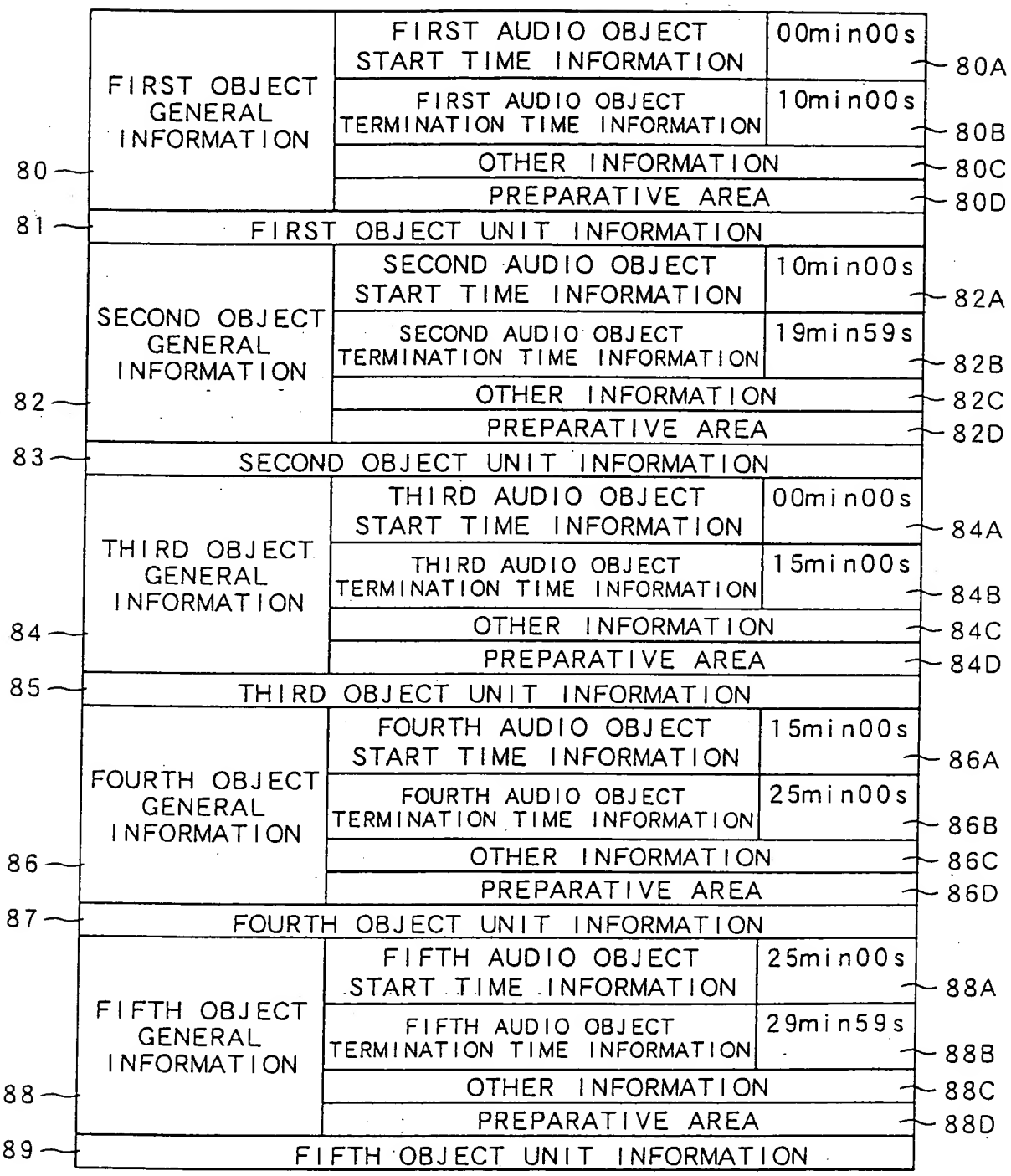

AFTER DIVISION
OSI'
PROGRAM CHAIN GENERAL INFORMATION
TRACK TOTAL NUMBER
CELL INFORMATION SEARCH POINTER TOTAL NUMBER
FIRST TRACK INFORMATION
PERMISSION INFORMATION
SECOND TRACK INFORMATION
PERMISSION INFORMATION
THIRD TRACK INFORMATION
PERMISSION INFORMATION
FOURTH TRACK INFORMAITON
PERMISSION INFORMATION
FIFTH TRACK INFORMATION
PERMISSION INFORMATION
FIRST CELL INFORMATION SEARCH POINTER
SECOND CELL INFORMATION SEARCH POINTER
THIRD CELL INFORMATION SEARCH POINTER
FOURTH CELL INFORMATION SEARCH POINTER
FIFTH CELL INFORMATION SEARCH POINTER
FIRST CELL INFORMATION
FIRST CELL START TIME INFORMATION
FIRST CELL TERMINATION TIME INFORMATION
SECOND CELL INFORMATION
SECOND CELL START TIME INFORMATION
SECOND CELL TERMINATION TIME INFORMATION
THIRD CELL INFORMATION
THIRD CELL START TIME INFORMATION
THIRD CELL TERMINATION TIME INFORMATION
FOURTH CELL INFORMATION
FOURTH CELL START TIME INFORMATION
FOURTH CELL TERMINATION TIME INFORMATION
FIFTH CELL INFORMATION
FIFTH CELL START TIME INFORMATION
FIFTH CELL TERMINATION TIME INFORMATION
60
60A
60B
61
61A
62
62A
63
63A
64
64A
65
65A
66
67
68
69
70
71
71A
71B
72
72A
72B
73
73A
73B
74
74A
74B
75
75A
75B

FIG. 8



EP 0 720 170 A2

EP 0 729 270 A1

FIG. 9

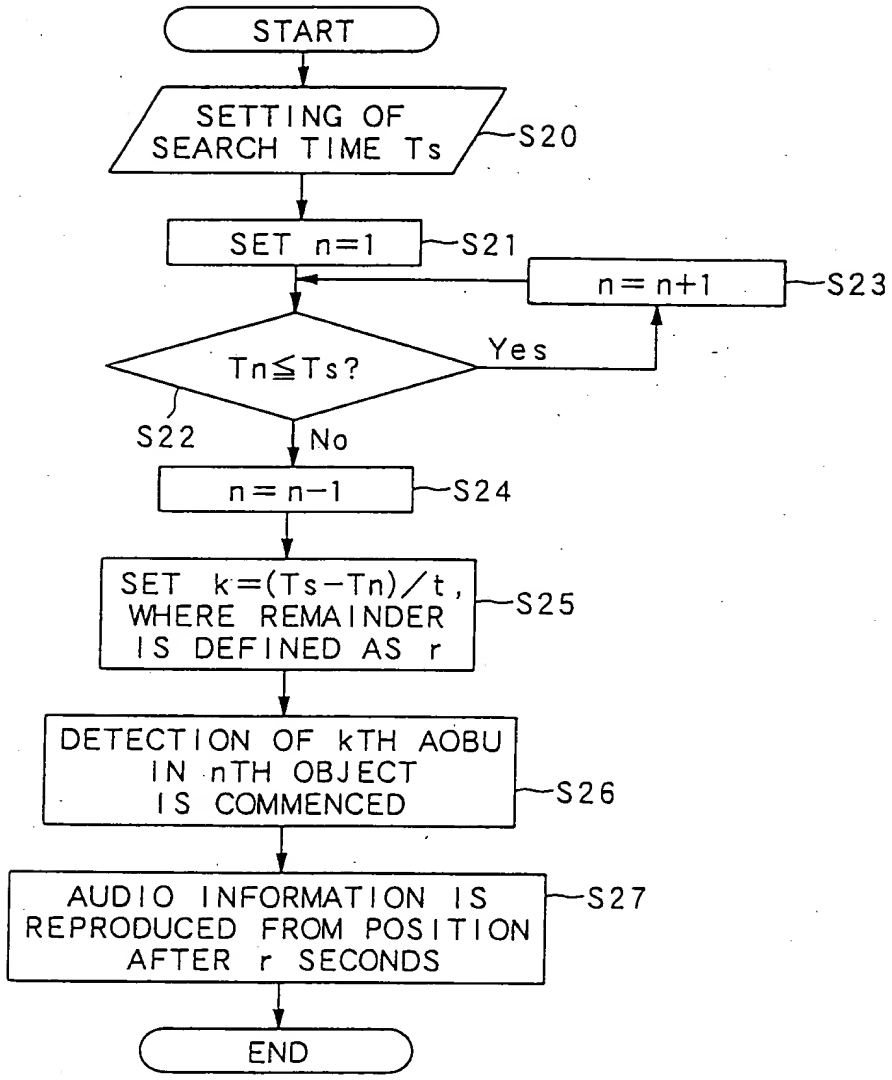


FIG.10

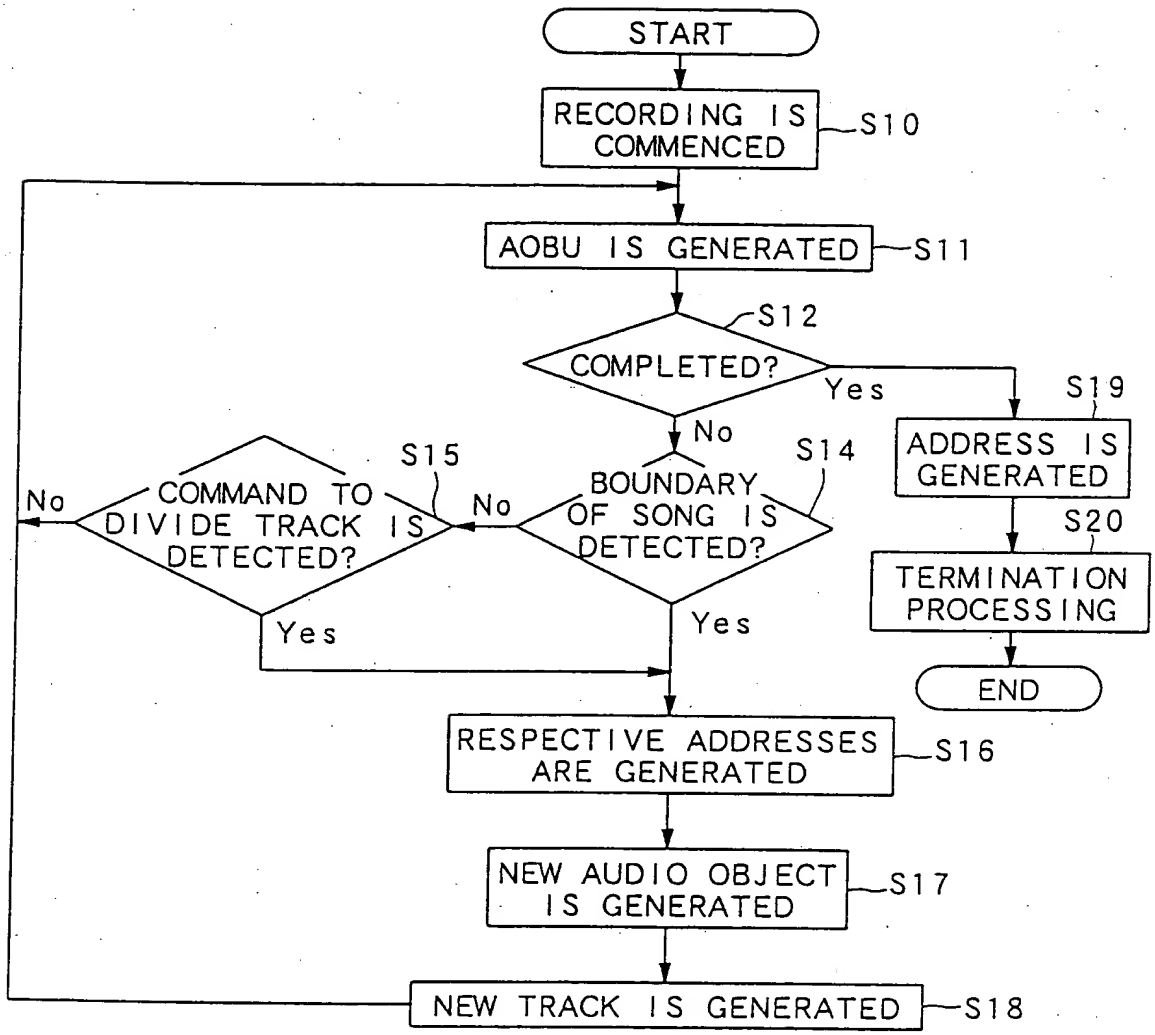

START
RECORDING IS COMMENCED
S10
AOBU IS GENERATED
S11
S12
COMPLETED?
Yes
S19
ADDRESS IS GENERATED
S20
TERMINATION PROCESSING
END
No
S14
BOUNDARY OF SONG IS DETECTED?
No
S15
COMMAND TO DIVIDE TRACK IS DETECTED?
No
Yes
Yes
RESPECTIVE ADDRESSES ARE GENERATED
S16
NEW AUDIO OBJECT IS GENERATED
S17
NEW TRACK IS GENERATED
S18

FIG.11

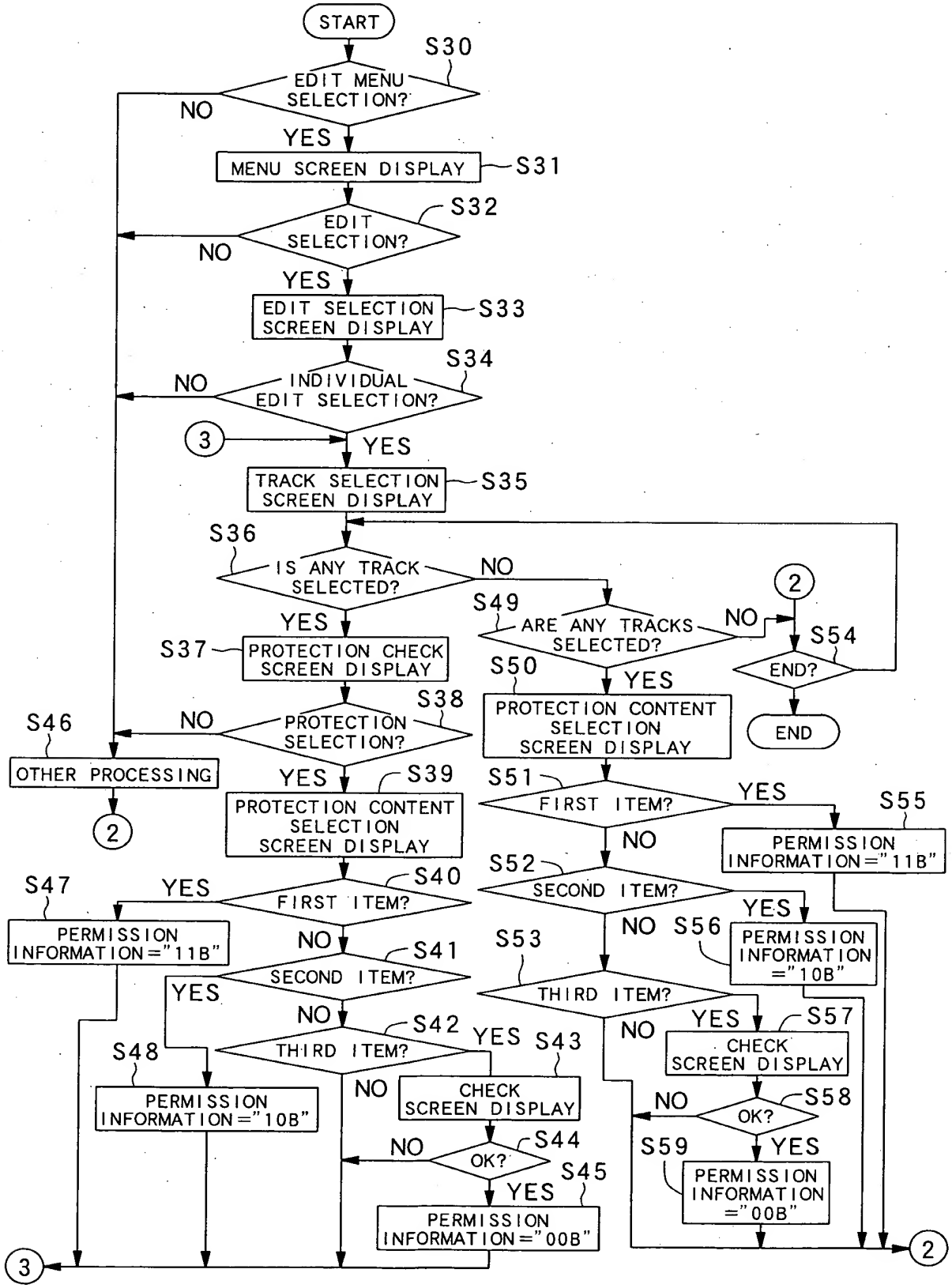

START
S30
EDIT MENU SELECTION?
NO
YES
MENU SCREEN DISPLAY
S31
S32
EDIT SELECTION?
NO
YES
EDIT SELECTION SCREEN DISPLAY
S33
S34
INDIVIDUAL EDIT SELECTION?
NO
3
YES
TRACK SELECTION SCREEN DISPLAY
S35
S36
IS ANY TRACK SELECTED?
NO
YES
S37
PROTECTION CHECK SCREEN DISPLAY
S38
PROTECTION SELECTION?
NO
S46
OTHER PROCESSING
2
YES
S39
PROTECTION CONTENT SELECTION SCREEN DISPLAY
S40
FIRST ITEM?
YES
S47
PERMISSION INFORMATION="11B"
NO
S41
SECOND ITEM?
YES
NO
S42
THIRD ITEM?
YES
S43
S48
PERMISSION INFORMATION="10B"
NO
CHECK SCREEN DISPLAY
S44
OK?
NO
YES
S45
PERMISSION INFORMATION="00B"
3
S49
ARE ANY TRACKS SELECTED?
NO
2
S54
END?
YES
END
S50
PROTECTION CONTENT SELECTION SCREEN DISPLAY
S51
FIRST ITEM?
YES
S55
PERMISSION INFORMATION="11B"
NO
S52
SECOND ITEM?
YES
NO
S56
PERMISSION INFORMATION="10B"
S53
THIRD ITEM?
NO
YES
S57
CHECK SCREEN DISPLAY
S58
OK?
NO
S59
YES
PERMISSION INFORMATION="00B"
2

FIG.12A

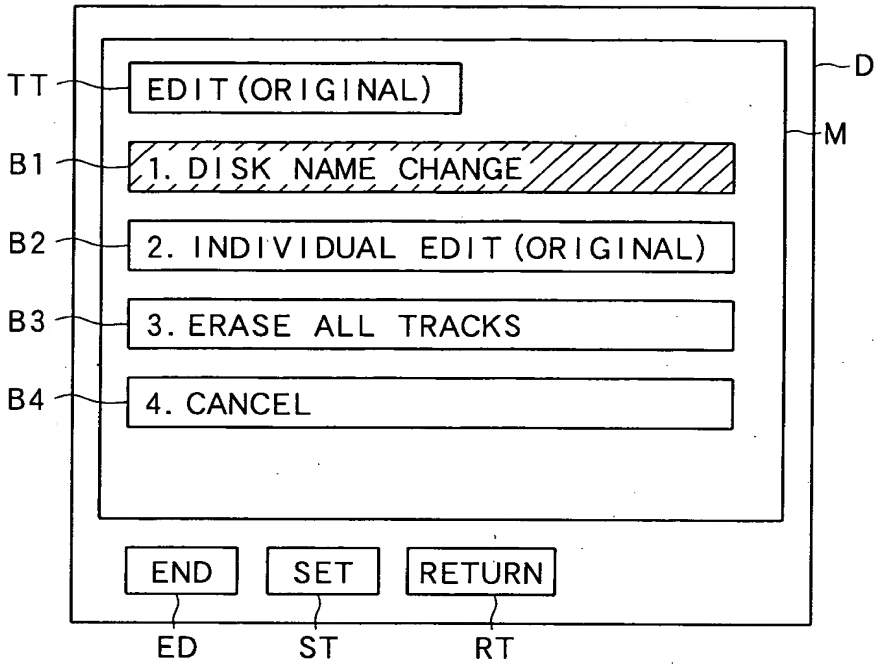
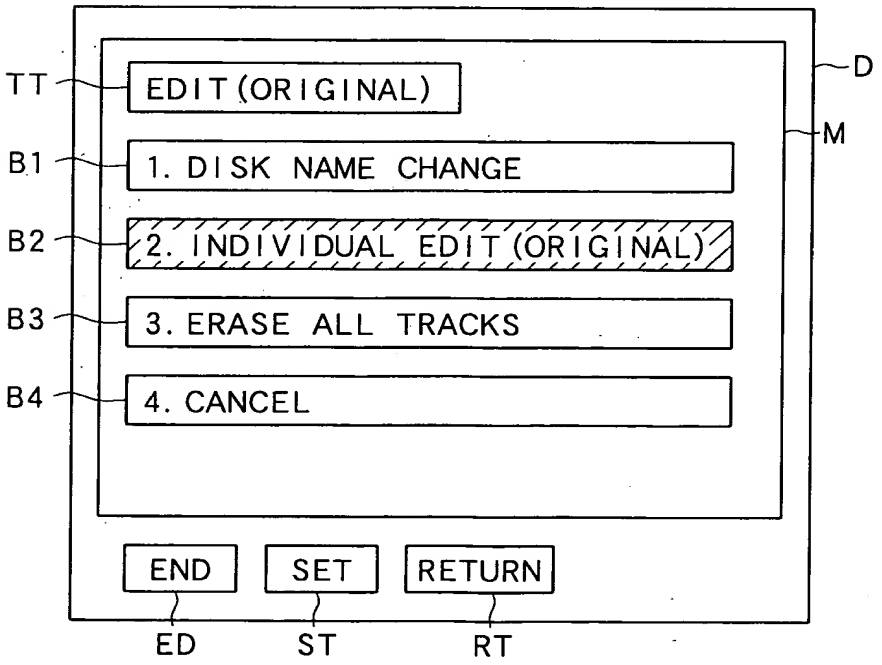


FIG.12B



EP 2 530 670 A1

FIG. 13A

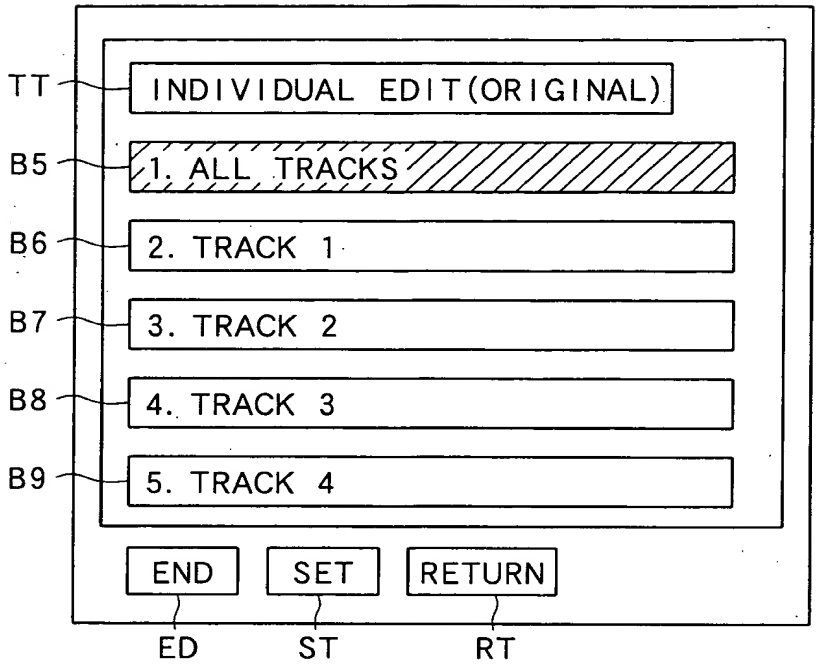
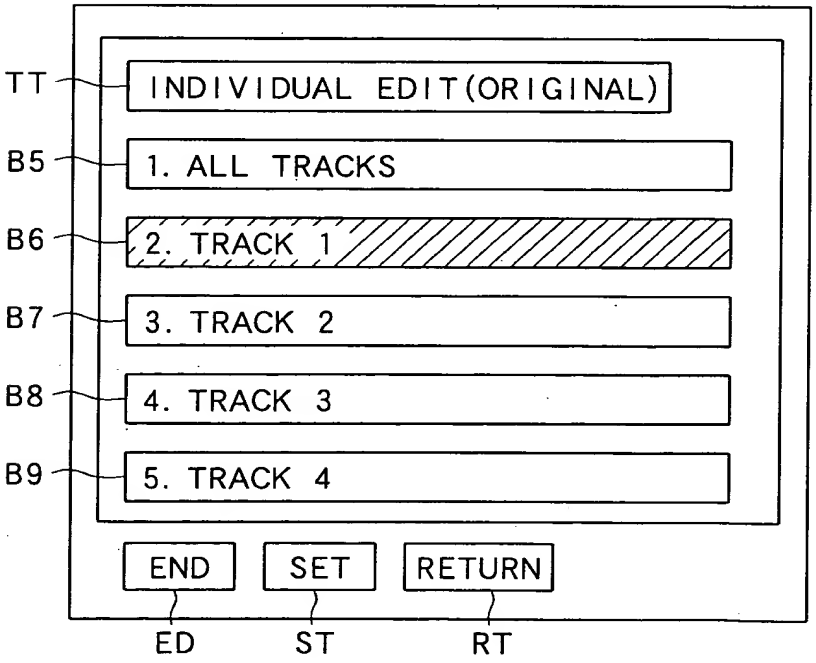


FIG. 13B



EP 0 727 790 A1

FIG.14A

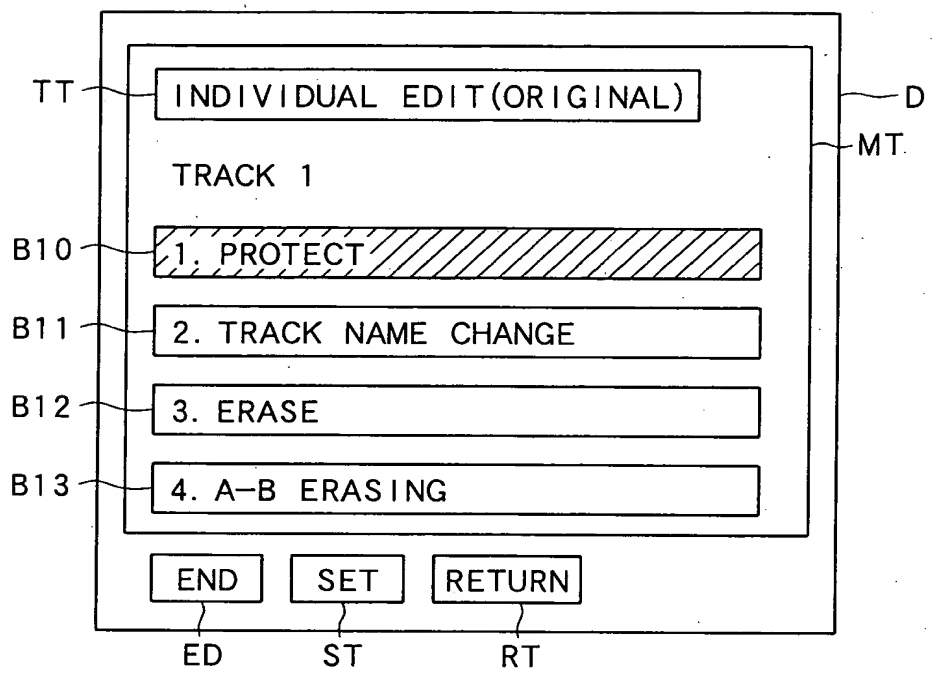
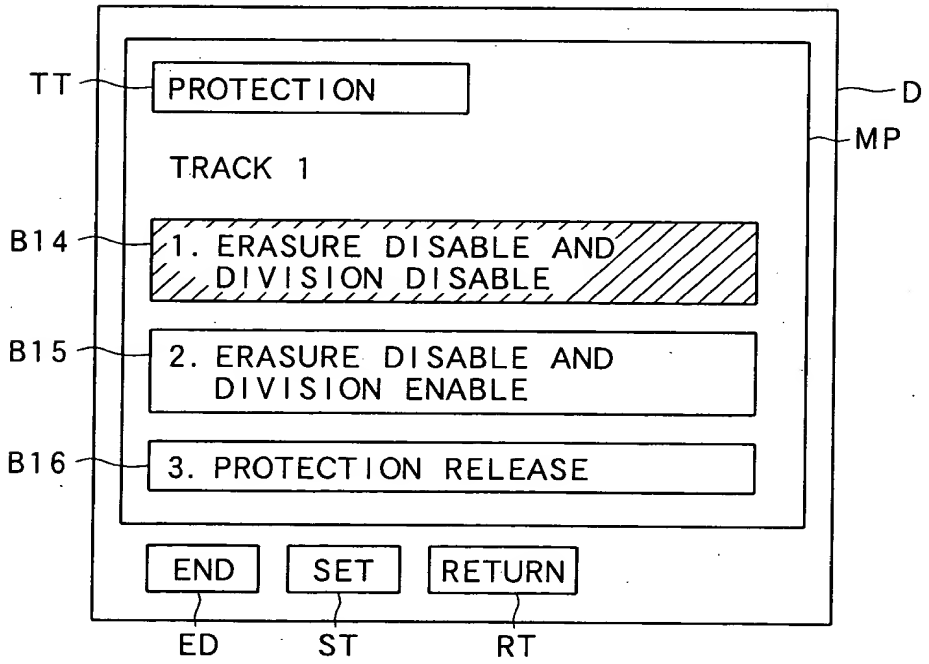


FIG.14B



EP 2 290 647 A1

FIG. 15A

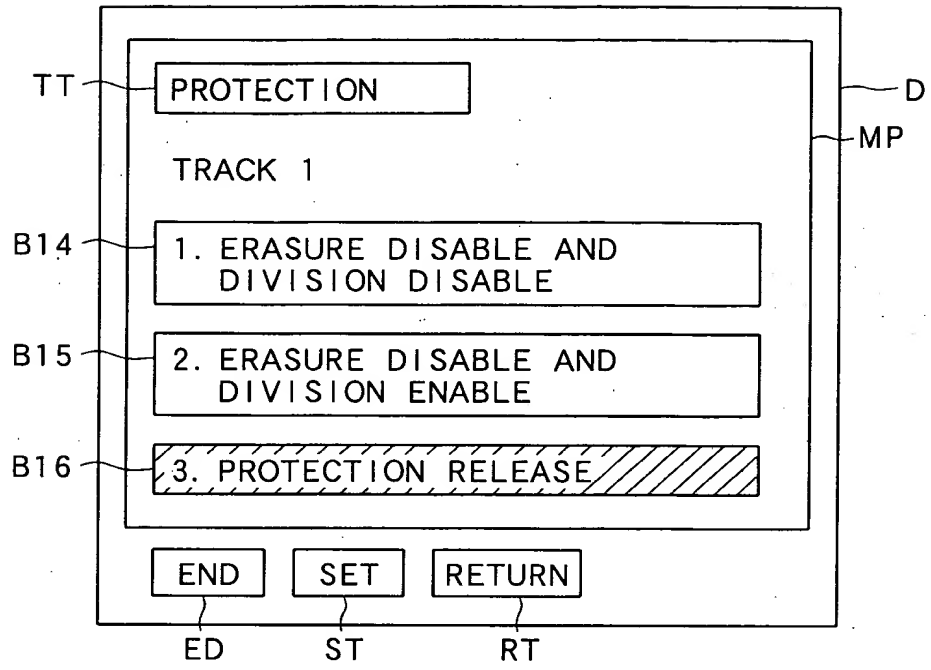
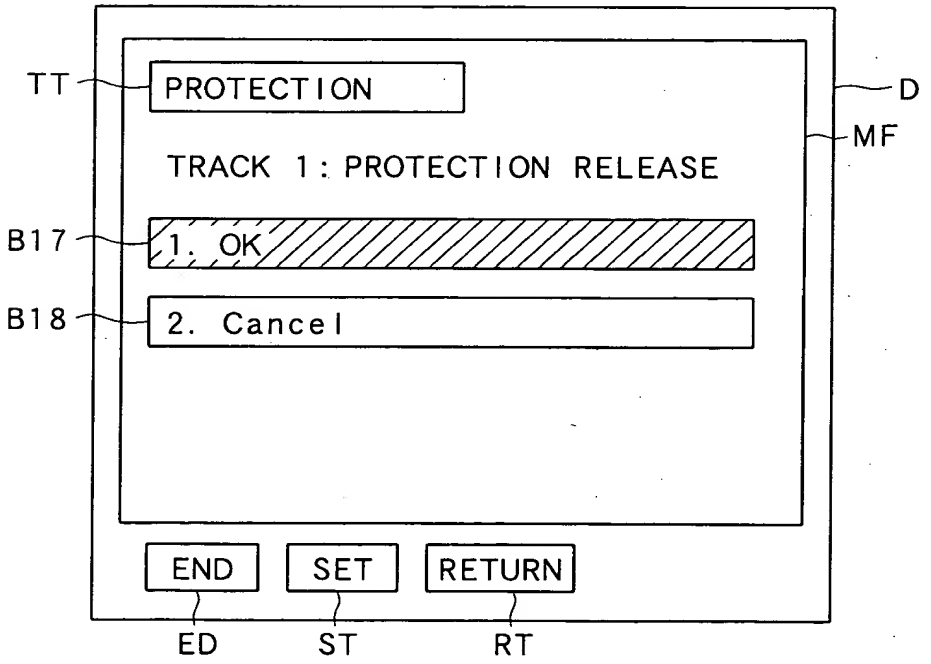


FIG. 15B



EP 0 742 570 A1